



DECUS

PROGRAM LIBRARY

DECUS NO.	8-244
TITLE	BINSAVE
AUTHOR	Michael H. Craven
COMPANY	Digital Equipment Corporation Maynard, Massachusetts
DATE	September 9, 1970
SOURCE LANGUAGE	PALD

DECUS

RESEARCH & DEVELOPMENT



BINSAVE

DECUS Program Library Write-up

DECUS No. 8-244

BINSAVE will punch a specified system or user saved file from the system device (disk or Dectape) onto high speed paper tape in Binary format. A four instruction patch will allow output to the ASR-33 teletype punch.

USAGE

BINSAVE requests the name of the file to be punched by typing:

TYPE FILE NAME
IN:

The user responds with a four character maximum file name. If the name has been incorrectly entered or if no saved file has been found by that name an error message will be typed out.

If the file is found the entry point (starting address) will be typed out and the program will be punched in Binary loader format.

ASR-33 TELETYPE PUNCH PATCH

To output on the low speed teletype punch change the following locations -

<u>Location</u>	<u>Contents</u>
325	7402
330	6046
1064	6041
1066	6046

After the starting address is typed out, the Program will come to a halt. Turn the teletype punch on and press continue.

DESIGN

BINSAVE occupies and actively uses locations 0 - 2500 with the starting address at location 200. The monitor head must be resident in memory since BINSAVE utilizes the Disk Monitor system I/O routines.

/ BINSAVE

/ THIS PROGRAM WILL PUNCH A SAVED FILE FROM THE
 / SYSTEM DEVICE ONTO PAPER TAPE IN BINARY FORMAT.

/ MIKE CRAVEN - DEC- AUGUST 8, 1969

```

0200          *200
0200  START,  CLA CLL
0201          TLS
0202          JMS I XTOUT
0203          MSG1
0204          JMS I XFLNAM
0205          TAD (177)
0206          DCA I XLINK
0207          TAD BUF1
0210          DCA I XBUFAD
0211          JMS I XINBLK
0212          CLA (-31)
0213          TAD CNT1
0214          DCA CNT1
0215          TAD BUF1
0216          TAD (3)
0217          DCA NPNT
0220          TAD I NPNT
0221          CIA
0222          TAD NAMFL
0223          SNA CLA
0224          JMP FCOMP
0225          TAD NPNT
0226          TAD (5)
0227          DCA NPNT
0230          ISZ CNT1
0231          JMP MLP1
0232          TAD I XLINK
0233          SZA CLA
0234          JMP GETDN
0235          JMS I XTOUT
0236          MSG3
0237          JMP START
0240          ISZ NPNT

0200          /TYPE OUT MESSAGE: TYPE FILE NAME....
0201          / INPUT 4 CHAR, MAX FILE NAME ON TTY
0202          / SET LINK IN IO ROUTINE FOR FIRST DN BLK
0203          / SET INPUT BUFFER ADDRESS
0204          / GET DN BLOCK ... IT HAS 3 HEAD WORDS
0205          / + 31 5 BLOCK ENTRIES + LINK WORD= 201 TOTAL
0206          / SET UP ENTRY COUNT TO SEARCH DN
0207          / FOR FILE NAME

0210          / POINTS TO FIRST WORD OF DN ENTRY
0211          / GET FIRST 2 CHARACTERS OF ENTRY FILE NAME
0212          / NEGATE THEIR VALUE
0213          / COMPARE WITH SEARCH FILE NAME
0214          / JUMP IF FIRST TWO CHARACTERS COMPARE
0215          / UPDATE ENTRY POINTER
0216          / FINISHED WITH THIS DN BLOCK?
0217          / NO- RETURN FOR NEXT ENTRY
0218          / YES- CHECK LINK FOR NEXT DN BLOCK
0219          / MORE DN BLOCKS?
0220          / YES- RETURN TO GET NEXT DN BLOCK
0221          / NO- MSG1 NAME NOT FOUND AS SAVE FILE
0222          / RETURN TO START OF PROGRAM....
0223          / MOVE POINTER TO LAST 2 CHARS IN DN ENTRY

```

0241 1432
0242 7041
0243 1024
0244 7650
0245 5251
0246 1032
0247 1373
0250 5227
0251 1032
0252 1375
0253 3032
0254 1432
0255 0372

SCOMP,

TAD I NPNT
CIA
TAD NAMFL+1
SNA CLA
JMP SCOMP
TAD NPNT
TAD (4
JMP BACK1
TAD NPNT
TAD (3
DCA NPNT
TAD I NPNT
AND (6000

/ GET CHARACTERS
/ NEGATE THEIR VALUE

/ COMPARE WITH SEARCH FILE NAME
/ JUMP IF ENTIRE FILENAME COMPARES
/ OTHERWISE UPDATE POINTER

/ AND RETURN TO SEARCH

/POINTS TO LAST WORD IN DN ENTRY

/ IS THIS A SAVED USER OR SYSTEM FILE?

/ BINSAVE PAL10

V141

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2116 PAGE 1-1

0256 1371
0257 7650
0260 5264
0261 1032
0262 7001
0263 5227
0264 1432
0265 0370
0266 3027
0267 1032
0270 1367
0271 3032
0272 1432
0273 3025
0274 2032
0275 1432
0276 3026
0277 1366
0300 3434
0301 1365
0302 3053

TAD (-6000
SNA CLA
JMP .+4
TAD NPNT
IAC
JMP BACK1
TAD I NPNT
AND (77
DCA FNUM
TAD NPNT
TAD (-2
DCA NPNT
TAD I NPNT
DCA FLOW
ISE NPNT
TAD I NPNT
DCA FENT
TAD (200
DCA I XLINK
TAD (-1
DCA DBADR

/ YES
/ NO- UPDATE POINTER
/ AND RETURN TO SEARCH
/ YIPEE... THIS IS THE FILE!!!!
/SAVE FILE NUMBER

/ SAVE LOW ADDRESS OF FILE

/ SAVE START ADDRESS (ENTRY PT.) OF FILE
/ SET LINK IN IO ROUTINE FOR SAM BLOCK 1
/ INITIALIZE DATA BLOCK ADDRESS


```

0303 4435      JMS I XINBLK
0304 4454      JMS I XSAMSR
0305 7640      SZA CLA
0306 5315      JMP SFFOUND
0307 1434      TAD I XLINK
0310 7640      SZA CLA
0311 5303      JMP BACK2
0312 4420      JMS I XTOUT
0313 1400      MSG4
0314 5200      JMP START
0315 4420      JMS I XTOUT
0316 1322      MSG6
0317 7200      CLA
0320 1026      TAD FENT
0321 4465      JMS I XOCOUT
0322 4431      JMS I XCRLF
0323 4431      JMS I XCRLF
0324 7000      NOP
0325 7000      NOP
0326 7000      NOP
0327 7200      CLA
0330 6026      PLS
0331 4457      JMS I XPLDTR
0332 7200      CLA
0333 1025      TAD FLOW
0334 7001      IAC
0335 7650      SNA CLA
0336 5456      JMP I XNCNTG
0337 3063      DCA CHKSUM
0340 7120      STL
0341 1025      TAD FLOW
0342 4464      JMS I XWDPN
0343 1053      TAD DBADR
0344 3434      DCA I XLINK
0345 4435      JMS I XINBLK
0346 4461      JMS I XPDATA
0347 1434      TAD I XLINK
0350 7640      SZA CLA
0351 5345      JMP MLP2
0352 1063      TAD CHKSUM
0353 4464      JMS I XWDPN
0354 4457      JMS I XPLDTR

      BACK2,
      SFFOUND,
      MLP2,

```

```

/ GET SAM BLOCK - PUT INTO BUF1 AREA
/ SEARCH SAM BLOCK FOR FILE LOCATION
/ AC SET TO 7777 IF FILE WAS FOUND
/ JUMP IF FOUND
/ OTHERWISE - CHECK SAM LINK
/ ARE THERE MORE SAM BLOCKS?
/ YES- RETURN TO INPUT NEXT SAM BLOCK
/ NO- OUTPUT MESSAGE!
/ FILE TAKES NO CORE
/ RETURN TO START
/ OUTPUT MESSAGE
/ START ADDRESS =
/
/ PICK UP ENTRY POINT OF FILE
/ PRINT IT
/
/ INSERT HALT HERE FOR TTY INPUT
/ " TURN ON PUNCH - PRESS CONTINUE...
/
/ PUNCH LEADER=TRAILER
/
/ THE FILE WAS FOUND IN THE SAM BLOCK
/ IS IT A CONTIGUOUS FILE?
/
/ NO- JUMP
/ YES- ZERO CHECKSUM
/ SET LINK BIT FOR ADDRESS WORD
/ GET START ADDRESS
/ PUNCH ADDRESS
/ GET SAM ADDRESS OF FIRST DATA BLOCK
/ SET IO LINK WORD
/ READ DATA BLOCK INTO BUFFER 1
/ PUNCH FIRST 200 WORDS IN BINARY FORMAT
/
/ HAS LAST BLOCK BEEN PUNCHED?
/ NO- RETURN TO GET NEXT BLOCK
/ YES
/ PUNCH CHECKSUM
/ PUNCH LEADER= TRAILER

```

JMP I XSTART / RETURN TO START OF PROGRAM

0355 5442
0365 7777
0366 0200
0367 7776
0370 0077
0371 2000
0372 6000
0373 0004
0374 0005
0375 0003
0376 7747
0377 0177
0400

PAGE /.....NEW MEMORY PAGE.....

/

BINSAVE	PAL10	V141	10-SEP-69	2116	PAGE 2-1
0400	1040	NCNTG.	TAD BUF2	/	NON-CONTIGUOUS PAGES IN FILE
0401	3441		DCA I XBUFAD	/	GET SAM ADDRESS OF FIRST DATA BLOCK
0402	1053		TAD DBADR		
0403	3434		DCA I XLINK		
0404	4435		JMS I XINBLK		
0405	7200		CLA		
0406	1037		TAD BUF1	/	SET REMAINDER OF INPUT BACK TO BUFFER 1
0407	3441		DCA I XBUFAD	/	SET ADDRESS POINTER TO START OF BUFFER 2
0410	1040		TAD BUF2	/	ZERO CHECKSUM
0411	3032		DCA NPNT		
0412	3063		DCA CHKSUM		


```

/
BINSAVE PAL10 V141 10-SEP-69 2116 PAGE 3
0413 1432 TAD I NPNT / GET ADDRESS
0414 7120 STL I XWDPUN / SET LINK BIT
0415 4464 JMS I XINBLK / PUNCH ADDRESS
0416 4435 JMS I XPDATA / READ DATA BLOCK INTO BUFFER 1
0417 4461 JMS NPNT / PUNCH FIRST 200 WORDS IN BINARY FORMAT
0420 2032 TAD I NPNT / UPDATE ADDRESS POINTER
0421 1432 IAC / ARE WE FINISHED ?
0422 7001 SNA CLA / YES - GO TO DOUBLE CHECK
0423 7650 JMP DCHECK / NO - NOT ACCORDING TO ADDRESS BLOCK
0424 5233 TAD I XLINK / DOUBLE CHECK WITH IO LINK WORD
0425 1434 SZA CLA / OK - RETURN FOR NEXT BLOCK
0426 7640 JMP MLP3 / PROBLEM - LINK SAYS FINISHED
0427 5213 JMS I XTOUT / ADDRESS SAYS THERE IS MORE....
0430 4420 MSG5 / OUTPUT MESSAGE! FILE END ERROR
0431 1433 JMP I XSTART / RETURN TO START
0432 5442 TAD I XLINK / DOUBLE CHECK WITH IO LINK WORD
0433 1434 SZA CLA / CONTRADICTION - OUTPUT ERROR MESSAGE
0434 7640 JMP JFIN / YES... WE ARE REALLY FINISHED!!
0435 5230 TAD CHKSUM / PUNCH CHECKSUM
0436 1063 JMS I XWDPUN / PUNCH LEADER-TRAILER
0437 4464 JMS I XPLDTR / RETURN TO START OF PROGRAM.....
0440 4457 JMP I XSTART / ... SUBROUTINES...
0441 5442 PAGE / OUTPUT MESSAGE ON TTY ROUTINE
0600 0000 0 CLA CLL / PICK UP MESSAGE LOCATION
0601 7300 TAD I TOUT / GET CHARACTER COUNT
0602 1600 ISZ TOUT / MOVE CHARACTER POINTER
0603 2200 DCA MESLOC / GET CHARACTER
0604 3043 TAD I MESLOC / TYPE IT
0605 1443 CIA CCNT / IS IT THE LAST CHARACTER?
0606 7041 DCA CCNT / NO - GO BACK FOR MORE
0607 3044 ISZ MESLOC / YES - EXIT
0610 2043 TAD I MESLOC / TYPE CHARACTER FROM AC ROUTINE
0611 1443 JMS I XTYPE
0612 4422 ISZ CCNT
0613 2044 JMP SLP1
0614 5210 JMP I TOUT
0615 5600

TYPE. 0 TSF 6
0616 0000
0617 6041

```

ADDRESS	DATA	INSTRUCTIONS	REMARKS
0620	5217	JMP 1=1	
0621	6046	TLS	
0622	7200	CLA	
0623	5616	JMP I TYPE / EXIT	
0624	0000	FLNAM, 0 / READS 4 CHARACTER MAX FILE NAME	
0625	7300	CLA CLL	/ A AND STORES IT IN EXCESS 40 FORMAT
0626	1377	TAD (CBUF	
0627	3051	DCA CPNT	
0630	1376	TAD (-4	
0631	3033	DCA CNT1	/ SET CHARACTER COUNT
0632	4430	JMS I XREAD	
0633	1375	TAD (-215	/ IS IT CARRIAGE RETURN?
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0634	7450	SNA	
0635	5275	JMP CARET	
0636	1374	TAD (215	
0637	3451	DCA I CPNT	
0640	2051	ISZ CPNT	
0641	2033	ISZ CNT1	
0642	5232	JMP SLP2	/ NOT FINISHED - GET MORE
0643	4431	JMS I XCRLF	/ CARRIAGE RETURN-LINE FEED IF FINISHED
0644	1377	TAD (CBUF	
0645	3051	DCA CPNT	
0646	1373	TAD (NAMFL	
0647	3032	DCA NPNT	
0650	1372	TAD (-2	
0651	3033	DCA CNT1	
0652	1451	TAD I CPNT	/ PACK IN 6 BIT EXCESS 40 FORMAT
0653	1371	TAD (40	
0654	7006	RTL	
0655	7006	RTL	
0656	7006	RTL	
0657	0370	AND (7700	
0660	3052	DCA TEMP1	
0661	2051	ISZ CPNT	
0662	1451	TAD I CPNT	
0663	1371	TAD (40	
0664	0367	AND (77	
0665	1052	TAD TEMP1	
0666	3432	DCA I NPNT	/ SAVE CHARACTERS IN 2 WORDS AT NAMFI
0667	2032	ISZ NPNT	

[illegible]

BINSAVE	PAL10	V141	10-SEP-69	2116	PAGE 4-2
1102	2044		ISZ CCNT	/	ARE WE FINISHED WITH THE BUFFER?
1103	5276		JMP SLP4	/	NO - RETURN TO PUNCH NEXT WORD
1104	5670		JMP I PDATA	/	YES- EXIT
1105	0000	WDPUN,	0	/	PUNCH ONE WORD ROUTINE
1106	3067		DCA TEMWRD	/	SAVE DATA OR ADDRESS WORD FROM AC
1107	1067		TAD TEMWRD	/	
1110	7012		RTR	/	ROTATE 6 HIGH ORDER BITS AND LINK
1111	7012		RTR	/	TO THE RIGHT IN THE AC
1112	7012		RTR	/	(LINK#1 FOR ADDRESS WORDS)
1113	0372		AND (177	/	SAVE RIGHTMOST 7 BITS
1114	4460		JMS I XPUNCH	/	PUNCH FIRST CHARACTER
1115	3066		DCA TEMCHK	/	SAVE CHARACTER (DUE TO CHECKSUM)
1116	1067		TAD TEMWRD	/	PICK UP WORD AGAIN
1117	0376		AND (0077	/	SAVE RIGHTMOST 6 BITS
1120	4460		JMS I XPUNCH	/	PUNCH SECOND CHARACTER OF THE WORD
1121	1063		TAD CHKSUM	/	
1122	1066		TAD TEMCHK	/	
1123	3063		DCA CHKSUM	/	UPDATE CHECKSUM
1124	5705		JMP I WDPUN	/	EXIT

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1125	0000	OCOUT,	Ø	/ PRINT WORD AS 4 OCTAL DIGITS	
1126	7100		CLL		
1127	7004		RAL		
1130	3067		DCA TEMWRD	/ SAVE DATA TO BE PRINTED	
1131	1371		TAD (=4		
1132	3044	SLP5,	DCA CCNT	/ SET UP 4 CHAR. COUNT	
1133	7200		CLA TEMWRD		
1134	1067		TAD		
1135	7006		RTL	/ POSITION THE DIGIT	
1136	7004		RAL		
1137	3067		DCA TEMWRD		
1140	1067		TAD TEMWRD		
1141	0370		AND (0007	/ CONVERT DIGIT TO ASCII	
1142	1367		TAD (0260		
1143	4422		JMS I XTYPE		
1144	2044		ISZ CCNT		
1145	5333		JMP SLP5	/ FINISHED ALL 4 DIGITS ?	
1146	5725		JMP I OCOUT	/ IF SO =	
1167	0260			EXIT.....	
1170	0007				
1171	7774				
1172	0177				
1173	0200				
1174	7566				
1175	7700				
1176	0077				
1177	7600				

MSG1.	PAGE	/CRLF TYPE	FILE NAME	MESSAGE AREA
	25			INI
	215			
	212			
	324			
	331			
	320			
	305			
	240			
	306			
	311			
	314			
	305			
	240			
	316			
	301	315	305	215
				212
				311
				316
				272
				010
				010

1200	1200
0025	1201
0015	1202
0212	1203
0324	1204
0331	1205
0320	1206
0305	1207
0240	1210
0306	1211
0311	1212
0314	1213
0305	1214
0240	1215
0316	1216
0301	1217
0315	1220
0305	1221
0215	1222
0212	1223
0311	1224
0316	1225
0272	1226
0000	1227
0000	1230
0000	

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1231 0020
1232 0215
1233 0212
1234 0323
1235 0331
1236 0323
1237 0240
1240 0311
1241 0317
1242 0240
1243 0305
1244 0322
1245 0322
1246 0317
1247 0322
1250 0215
1251 0212
1252 0000
1253 0000
1254 0000
1255 0000

MSG2.

20 /CRLF SYS IO ERROR CRLF
21512121323133113231240131113171240

30513221322131713221215121210101010

1256 0040
1257 0215
1260 0212
1261 0316
1262 0301
1263 0315
1264 0305
1265 0240
1266 0316
1267 0317
1270 0324
1271 0240
1272 0306
1273 0317
1274 0325
1275 0316
1276 0304
1277 0240
1300 0301
1301 0323

MSG3.

40 /CRLF NAME NOT FOUND AS SAVE FILE CRLF
215121213161301131513051240131613171324

2401306131713251316130412401301132312401323

1302 0240
1303 0323
1304 0301
1305 0326
1306 0305
1307 0240
1310 0306
1311 0311
1312 0314
1313 0305
1314 0215
1315 0212
1316 0000

30113261305124013061311131413051215121210101010

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1317 0000
1320 0000
1321 0000

1322 0023
1323 0215
1324 0212
1325 0323
1326 0324
1327 0301
1330 0322
1331 0324
1332 0240
1333 0301
1334 0304
1335 0304
1336 0322
1337 0305
1340 0323
1341 0323
1342 0240
1343 0275
1344 0240
1345 0000
1346 0000
1347 0000

MSG6,

23

/ CRLF START ADDRESS =
21512121323132413011322132412401301

30413041322130513231323124012751240101010

1400

1400
1401
1402
1403
1404
1405
1406
1407
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1411
1412
1413
1414
1415
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1417
1420
1421
1422
1423
1424
1425
1426
1427

0026
0215
0212
0306
0311
0314
0305
0240
0324
0301
0313
0305
0323
0240
0316
0317
0240
0303
0317
0322
0305
0215
0212
0000

MSG4.

PAGE

26

/CRLF FILE TAKES NO CORE CRLF
21512121306131113141305124013241301131313051323

/.....NEW PAGE.....

240131613171240130313171322130512151212101010

/ BINSAVE PAL10 V141 10-SEP-69 2116 PAGE 5-3

1430 0000
1431 0000
1432 0000

1433 0022
1434 0215
1435 0212
1436 0306
1437 0311
1440 0314
1441 0305
1442 0240
1443 0305
1444 0316
1445 0304
1446 0240
1447 0305
1450 0322
1451 0322
1452 0317
1453 0322
1454 0215
1455 0212
1456 0000
1457 0000
1460 0000

MSG5, 22 /CRLF FILE END ERROR CRLF
21512121306131113141305124013051316

30412401305132213221317132212151212101010


```

0020 / PAGE 0 - COMMON DATA AREA
/ TAGS BEGINNING WITH X REPRESENT INDIRECT LINKAGE...

0020 XTOUT, TOUT /MESSAGE OUTPUT ROUTINE
0021 XFLNAM, FLNAM / ROUTINE TO INPUT 4 CHARACTER FILE NAME
0022 XTYPE, TYPE / TYPES ONE CHARACTER
0023 NAMFL, 010 / 4 CHAR. FILE NAME IN EXCESS 40 FORMAT
0024
0025 FLOW, 0 / LOW ADDRESS OF FILE (=7777 IF NOT CONTIGUOUS)
0026 FENT, 0 / ENTRY POINT (STARTING ADDRESS) OF FILE
0027 FNUM, 0 / FILE NUMBER
0030 XREAD, READ / READ AND ECHO ONE CHARACTER
0031 XCRLF, CRLF / CARRIAGE RETURN-LINE FEED ROUTINE

0032 NPNT, 0 / POINTER
0033 CNT1, 0 / COUNTER
0034 XLINK, LINK / LINK WORD IN I/O ROUTINE
0035 XINBLK, INBLK / SYSTEM I/O ROUTINE
0036 XERIN, ERIN / INPUT ERROR ROUTINE
0037 BUF1, 2000 / INPUT BUFFER - AREA 1
0040 BUF2, 2202 / INPUT BUFFER - AREA 2
0041 XBUFAD, BUFAD / I/O ROUTINE BUFFER ADDRESS
0042 XSTART, START / PROGRAM START ADDRESS
0043 MESLOC, 0 / POINTS TO LOCATION OF OUTPUT MESSAGE
0044 CCNT, 0 / CHARACTER COUNTER
0045 CBUF, 0101010 / FILE NAME BUFFER
0046

```

BINSAVE	PAL10	V141	10-SEP-69	2:16	PAGE 5-4
---------	-------	------	-----------	------	----------

0047	0000	CPNT,	0	/	CHARACTER POINTER
0050	0000	TEMP1,	0	/	TEMPORARY STORAGE
0051	0000	DBADR,	0	/	DATA BUFFER ADDRESS FOR SAM SEARCH
0052	0000	XSAMSR,	SAMSR	/	SAM BLOCK SEARCH ROUTINE
0053	0000	NCOMP,	0	/	FILE COMPARE NUMBER IN SAM SEARCH
0054	1000	XNCNTG,	NCNTG	/	NON-CONTIGUOUS FILE ROUTINE
0055	0000	XPLDTR,	PLDTR	/	LEADER-TRAILER PUNCH ROUTINE
0056	0400	XPUNCH,	PUNCH	/	CHARACTER PUNCH ROUTINE
0057	1052	XPDATA,	PDATA	/	PUNCH DATA BUFFER ROUTINE
0060	1063	WPNT,	0	/	WORD POINTER FOR PUNCH ROUTINE
0061	1070	CHKSUM,	0	/	CHECKSUM
0062	0000	XWDPUN,	WDPUN	/	PUNCH ONE WORD ROUTINE
0063	0000	XOCOUT,	OCOUT	/	ROUTINE TO TYPE WORD AS 4 OCTAL DIGITS
0064	1105	TEMCHK,	0	/	TEMPORARY LOC FOR PART OF CHECKSUM
0065	1125	TEMWRD,	0	/	TEMPORARY WORD STORAGE
0066	0000				
0067	0000				

S

0000	0000000000	0000000000	1111111111	1111111111	0000000000	1111111111	0000000000
0100	0000000000	0000000000	0000000000	0000000000	0000000000	0000000000	0000000000
0200	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111
0300	1111111111	1111111111	1111111111	1111111111	1111111111	0000001111	1111111111
0400	1111111111	1111111111	1111111111	1100000000	0000000000	0000000000	0000000000
0500	0000000000	0000000000	0000000000	0000000000	0000000000	0000000000	0000000000
0600	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111
0700	1111111111	1111111111	1111111111	0000000000	0000000000	0000111111	1111111111
1000	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111
1100	1111111111	1111111111	1111111111	1111111110	0000000000	0000000011	1111111111
1200	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111	1111111111
1300	1111111111	1111111111	1111111111	1111111111	0000000000	0000000000	0000000000
1400	1111111111	1111111111	1111111111	1111111111	1111111111	1000000000	0000000000
1500	0000000000	0000000000	0000000000	0000000000	0000000000	0000000000	0000000000
1600							
1700							
2000							
2100							
2200							
2300							
2400							
2500							
2600							
2700							

3000
3100
3200
3300
3400
3500
3600
3700

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4000
4100
4200
4300
4400
4500
4600
4700
5000
5100
5200
5300

5400
5500
5600
5700

6000
6100
6200
6300
6400
6500
6600
6700

7000
7100
7200
7300
7400
7500
7600
7700

BACK1	0227	SLP2	0632
BACK2	0303	SLP3	0652
BLOCK	0724	SLP4	1076
BUF1	0037	SLP5	1133
BUF2	0040	START	0200
BUFAD	0725	TEMCHK	0066
CARET	0675	TEMP1	0052
CBUF	0045	TEMWRD	0067
CCNT	0044	TOUT	0600
CHKSUM	0063	TYPE	0616
CNT1	0033	WDPUN	1105
CPNT	0051	WPNT	0062
CRLF	0711	XBUFAD	0041
DBADR	0053	XCRLF	0031
DCHECK	0433	XERIN	0036
ERIN	0731	XFLNAM	0021
FCOMP	0240	XINBLK	0035
FENT	0026	XLINK	0034
FLNAM	0624	XNCNTG	0056
FLOW	0025	XOCOUT	0065
FNUM	0027	XPDATA	0061
GETDN	0211	XPLDTR	0057
INBLK	0717	XPUNCH	0060
JFIN	0430	XREAD	0030
LEFT	1035	XSAMSR	0054
LINK	0726	XSTART	0042
MESLOC	0043	XTOUT	0020
MLP1	0220	XTYPE	0022
MLP2	0345	XWDPUN	0064
MLP3	0413		
MSG1	1200		
MSG2	1231		
MSG3	1256		
MSG4	1400		
MSG5	1433		
MSG6	1322		
NAMFL	0023		
NCNTG	0400		
NCOMP	0055		
NPNT	0032		
OOCUT	1125		
PDATA	1070		
PLDTR	1052		
PUNCH	1063		
RDONE	0643		
READ	0703		
RIGHT	1010		
SAMOUT	1050		
SAMSR	1000		
SCOMP	0251		
SFOUND	0315		
SLP1	0610		

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ERRORS DETECTED: 0

LINKS GENERATED: 0

RUN-TIME: 5 SECONDS

2K CORE USED

